## (19) World Intellectual Property Organization International Bureau



### 

#### (43) International Publication Date 16 May 2002 (16.05.2002)

### **PCT**

# (10) International Publication Number WO 02/38127 A2

(51) International Patent Classification7:

-

- (21) International Application Number: PCT/GB01/04873
- (22) International Filing Date:

1 November 2001 (01.11.2001)

(25) Filing Language:

English

A61K 9/00

(26) Publication Language:

English

(30) Priority Data:

0027357.3

9 November 2000 (09.11.2000) GE

- (71) Applicant (for all designated States except US): BRAD-FORD PARTICLE DESIGN LTD. [GB/GB]; Unit 69, Listerhills Science Park, Campus Road, Bradford BD7 1HR (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): HANNA, Mazen, Hermiz [GB/GB]; 6 Woodland Grove, Heaton, Bradford BD9 6PQ (GB). YORK, Peter [GB/GB]; 47 Parish Ghyll Drive, Ilkley LS29 9PR (GB).
- (74) Agents: BREWSTER, Andrea, Ruth et al.; Greaves-Brewster, 24Λ Woodborough Road, Winscombe, North Somerset BS25 1AD (GB).

- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PII, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GII, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A2

#### (54) Title: PARTICLE FORMATION METHODS AND THEIR PRODUCTS

(57) Abstract: Preparation of particles of an active substance having a layer of an additive at the particle surfaces, by dissolving both the active substance and the additive in a vehicle to form a target solution, and contacting the target solution with an anti-solvent fluid using a SLIDS<sup>TM</sup> particle formation process, to cause the active substance and additive to coprecipitate. The additive is typically a protective additive, in particular a taste and/or odour masking agent. Also provided is a particulate coformulation made by the method, which has a finite gradient in the relative additive concentration, which concentration increases radially outwards from the active rich core to the additive-rich surface of the particles.